Amendments to and Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended) A method of obtaining neural responses with a stimulation system having an array of electrodes, E1...EN, to generate growth curves, NR #1 to NR #Last, the method comprising:

(a) delivering, without causing a predetermined level of NR attenuation, a stimulus train having X stimuli through one electrode of the array E1...EN and recording, X number of times, a first NR datapoint, which datapoint is part of growth curve NR #1;

(b) repeating the above process of stimulating through each selected ones of electrodes of the array E1...EN and recording a datapoint corresponding to each selected electrode and each growth curve, NR #2 to NR #Last, wherein each datapoint is recorded at least once, without causing a predetermined level of NR attenuation; and

(c) repeating the above steps (a) and (b) as many times as necessary to generate additional, different datapoints on each selected growth curve NR#1 to NR #Last; [[and]]

wherein X is a variable, whole number 1 or greater, and X represents the number of stimuli in any stimulus train; and

wherein no two adjacent electrodes or electrode configurations deliver stimulation immediately, one after the other, in order to reduce channel cross-talk.

Claim 2 (original) The method of claim 1, wherein the step (c) to generate additional, different datapoints on each NR growth curve from NR#1 to NR #Last is accomplished by varying the stimulus amplitude while keeping the stimulus pulsewidth constant.

Claim 3 (original) The method of claim 1, further comprising:

(d) obtaining an averaged datapoint for each growth curve NR#1 to NR #Last by averaging all available recordings for each datapoint.

Claim 4 (original) The method of claim 1, further comprising:

(d) computing real-time averages of each datapoint, its confidence intervals and curve fitting a growth curve for each NR #1 ... NR #Last, based on available datapoints.

Claim 5 (original) The method of claim 4, further comprising:

(e) automatically terminating the recording session according to pre-programmed triggers based on real-time calculated datapoint values and their confidence intervals.

Claim 6 (original) The method of claim 4, further comprising:

(e) visually displaying fitted growth curves, NR #1 ... NR #Last, real-time averages of each datapoint on each growth curve, and confidence intervals for each datapoint; and

(f) terminating the recording session by a program operator based on visual feedback of the real-time display of growth curves, their averaged datapoints and confidence intervals for each datapoint.

Claim 7 (original) The method of claim 1, further comprising:

(d) automatically terminating the recording of a current datapoint by a software program based on pre-programmed triggers.

Claim 8 (original) The method of claim 1, wherein the electrodes stimulate spinal cord nerves.

Claim 9 (original) The method of claim 1, wherein the electrodes stimulate cochlear nerves.

Claim 10 (original) The method of claim 9, wherein X is a variable, whole number between 1 and 50.

Claim 11 (original) The method of claim 9, wherein the inter-stimulus time interval between the delivery of successive stimuli for successively recording one datapoint is between about 0.002 and 1 second.

Claim 12 (canceled)

Claim 13 (currently amended) A method of obtaining neural responses to generate at least two growth curves with a stimulation system having an array of stimulating electrodes, E1...EN, the method comprising:

(a) delivering a stimulus train having X stimuli, without causing a predetermined level of attenuation of NR, the stimulus train delivered through a selected first electrode in the electrode array E1...EN, to generate a replication of a data point for the first growth curve selected among, NR #1 ... NR #Last; and

(b) repeating step (a) for at least a second, selected electrode in the electrode array to generate a replication of a datapoint located on at least a second growth curve selected among, NR#1 ... NR # Last,

wherein delivering a first stimulus train to obtain a first datapoint and delivering a second stimulus train to obtain a second datapoint, when the two datapoints are located on the same, first growth curve, are never performed immediately one after the other, without the occurrence of an intervening wait state or an intervening delivery of a third stimulus to obtain a datapoint on a different, second growth curve; [[and]]

wherein X is a variable, whole number 1 or greater; and

wherein the predetermined level of attenuation of the NR is a decrease of the last NR, in response to the (X+1)th stimulus, by at least a predetermined percentage, P.

Claim 14 (canceled)

Claim 15 (original) The method of claim 13, further comprising:

(c) repeating, multiple times, the steps (a) and (b), by applying stimuli having different magnitudes when applying a stimulus train through each selected electrode, to obtain additional replications of datapoints in order to generate selected growth curves, NR#1...NR #Last.

Claim 16 (original) The method of claim 13, wherein the growth curves are for cochlear nerves.

Claim 17 (original) The method of claim 16, wherein each stimulus train has between 1 and 50 substantially identical stimulus pulses.

Claim 18 (original) The method of claim 17, wherein the inter-stimulus time interval between successive stimuli in each stimulus train is between about 1 to 0.002 seconds.

Claim 19 (original) The method of claim 13, wherein stimulation is accomplished with a monopolar electrode configuration.

Claim 20 (currently amended) ~~The method of claim 13,~~ A method of obtaining neural responses to generate at least two growth curves with a stimulation system having an array of stimulating electrodes, E1...EN, the method comprising:

(a) delivering a stimulus train having X stimuli, without causing a predetermined level of attenuation of NR, the stimulus train delivered through a selected first electrode in the electrode array E1...EN, to generate a replication of a data point for the first growth curve selected among, NR #1 ... NR #Last; and

(b) repeating step (a) for at least a second, selected electrode in the electrode array to generate a replication of a datapoint located on at least a second growth curve selected among, NR#1 ... NR # Last;

wherein delivering a first stimulus train to obtain a first datapoint and delivering a second stimulus train to obtain a second datapoint, when the two datapoints are located on the same, first growth curve, are never performed immediately one after the other, without the occurrence of an intervening wait state or an intervening delivery of a third stimulus to obtain a datapoint on a different, second growth curve;

wherein X is a variable, whole number 1 or greater; and

wherein, when there are first and second adjacent electrodes having overlapping coverage of a subset of nerves and a first stimulus train is delivered through the first electrode, a second stimulus train is not immediately thereafter, delivered through the second, adjacent electrode, without an occurrence of an intervening wait time sufficient for nerve recovery of nerves stimulated by the first stimulus train or a delivery of a third stimulus train to a third electrode, which third electrode is not adjacent to the first electrode.

Claim 21 (new) The method of claim 20, further comprising:

(c) repeating, multiple times, the steps (a) and (b), by applying stimuli having different magnitudes when applying a stimulus train through each selected electrode, to obtain additional replications of datapoints in order to generate selected growth curves, NR#1...NR #Last.

Claim 22 (new) The method of claim 20, wherein the growth curves are for cochlear nerves.

Claim 23 (new) The method of claim 22, wherein each stimulus train has between 1 and 50 substantially identical stimulus pulses.

Claim 24 (new) The method of claim 23, wherein the inter-stimulus time interval between successive stimuli in each stimulus train is between about 1 to 0.002 seconds.

Claim 25 (new) The method of claim 20, wherein stimulation is accomplished with a monopolar electrode configuration.

Claim 26 (new) A method of obtaining neural responses with a stimulation system having an array of electrodes, E1...EN, to generate growth curves, NR #1 to NR #Last, the method comprising:

(a) delivering, without causing a predetermined level of NR attenuation, a stimulus train having X stimuli through one electrode of the array E1...EN and recording, X number of times, a first NR datapoint, which datapoint is part of growth curve NR #1;

(b) repeating the above process of stimulating through each selected ones of electrodes of the array E1...EN and recording a datapoint corresponding to each selected electrode and each growth curve, NR #2 to NR #Last, wherein each datapoint is recorded at least once, without causing a predetermined level of NR attenuation;

(c) repeating the above steps (a) and (b) as many times as necessary to generate additional, different datapoints on each selected growth curve NR#1 to NR #Last; and

(d) obtaining an averaged datapoint for each growth curve NR#1 to NR #Last by averaging all available recordings for each datapoint;

wherein X is a variable, whole number 1 or greater, and X represents the number of stimuli in any stimulus train.

Claim 27 (new) The method of claim 26, wherein the step (c) to generate additional, different datapoints on each NR growth curve from NR#1 to NR #Last is accomplished by varying the stimulus amplitude while keeping the stimulus pulsewidth constant.

Claim 28 (new) A method of obtaining neural responses with a stimulation system having an array of electrodes, E1...EN, to generate growth curves, NR #1 to NR #Last, the method comprising:

(a) delivering, without causing a predetermined level of NR attenuation, a stimulus train having X stimuli through one electrode of the array E1...EN and recording, X number of times, a first NR datapoint, which datapoint is part of growth curve NR #1;

(b) repeating the above process of stimulating through each selected ones of electrodes of the array E1...EN and recording a datapoint corresponding to each selected electrode and each growth curve, NR #2 to NR #Last, wherein each datapoint is recorded at least once, without causing a predetermined level of NR attenuation;

(c) repeating the above steps (a) and (b) as many times as necessary to generate additional, different datapoints on each selected growth curve NR#1 to NR #Last; and

(d) computing real-time averages of each datapoint, its confidence intervals and curve fitting a growth curve for each NR #1 ... NR #Last, based on available datapoints;

wherein X is a variable, whole number 1 or greater, and X represents the number of stimuli in any stimulus train.

Claim 29 (new) The method of claim 28, wherein the step (c) to generate additional, different datapoints on each NR growth curve from NR#1 to NR #Last is accomplished by varying the stimulus amplitude while keeping the stimulus pulsewidth constant.

Claim 30 (new) A method of obtaining neural responses with a stimulation system having an array of electrodes, E1...EN, to generate growth curves, NR #1 to NR #Last, the method comprising:

(a) delivering, without causing a predetermined level of NR attenuation, a stimulus train having X stimuli through one electrode of the array E1...EN and recording, X number of times, a first NR datapoint, which datapoint is part of growth curve NR #1;

(b) repeating the above process of stimulating through each selected ones of electrodes of the array E1...EN and recording a datapoint corresponding to each selected electrode and each growth curve, NR #2 to NR #Last, wherein each datapoint is recorded at least once, without causing a predetermined level of NR attenuation; [[and]]

(c) repeating the above steps (a) and (b) as many times as necessary to generate additional, different datapoints on each selected growth curve NR#1 to NR #Last;

(d) computing real-time averages of each datapoint, its confidence intervals and curve fitting a growth curve for each NR #1 ... NR #Last, based on available datapoints; and

(e) automatically terminating the recording session according to pre-programmed triggers based on real-time calculated datapoint values and their confidence intervals;

wherein X is a variable, whole number 1 or greater, and X represents the number of stimuli in any stimulus train.

Claim 31 (new) The method of claim 30, wherein the step (c) to generate additional, different datapoints on each NR growth curve from NR#1 to NR #Last is accomplished by varying the stimulus amplitude while keeping the stimulus pulsewidth constant.

Claim 32 (new) A method of obtaining neural responses with a stimulation system having an array of electrodes, E1...EN, to generate growth curves, NR #1 to NR #Last, the method comprising:

(a) delivering, without causing a predetermined level of NR attenuation, a stimulus train having X stimuli through one electrode of the array E1...EN and recording, X number of times, a first NR datapoint, which datapoint is part of growth curve NR #1;

(b) repeating the above process of stimulating through each selected ones of electrodes of the array E1...EN and recording a datapoint corresponding to each selected electrode and each growth curve, NR #2 to NR #Last, wherein each datapoint is recorded at least once, without causing a predetermined level of NR attenuation; [[and]]

(c) repeating the above steps (a) and (b) as many times as necessary to generate additional, different datapoints on each selected growth curve NR#1 to NR #Last;

(d) computing real-time averages of each datapoint, its confidence intervals and curve fitting a growth curve for each NR #1 ... NR #Last, based on available datapoints;

(e) visually displaying fitted growth curves, NR #1 ... NR #Last, real-time averages of each datapoint on each growth curve, and confidence intervals for each datapoint; and

(f) terminating the recording session by a program operator based on visual feedback of the real-time display of growth curves, their averaged datapoints and confidence intervals for each datapoint;

wherein X is a variable, whole number 1 or greater, and X represents the number of stimuli in any stimulus train.

Claim 33 (new) The method of claim 32, wherein the step (c) to generate additional, different datapoints on each NR growth curve from NR#1 to NR #Last is accomplished by varying the stimulus amplitude while keeping the stimulus pulsewidth constant.

Claim 34 (new) A method of obtaining neural responses with a stimulation system having an array of electrodes, E1...EN, to generate growth curves, NR #1 to NR #Last, the method comprising:

(a) delivering, without causing a predetermined level of NR attenuation, a stimulus train having X stimuli through one electrode of the array E1...EN and recording, X number of times, a first NR datapoint, which datapoint is part of growth curve NR #1;

(b) repeating the above process of stimulating through each selected ones of electrodes of the array E1...EN and recording a datapoint corresponding to each selected electrode and each growth curve, NR #2 to NR #Last, wherein each datapoint is recorded at least once, without causing a predetermined level of NR attenuation;

(c) repeating the above steps (a) and (b) as many times as necessary to generate additional, different datapoints on each selected growth curve NR#1 to NR #Last; and

(d) automatically terminating the recording of a current datapoint by a software program based on pre-programmed triggers;

wherein X is a variable, whole number 1 or greater, and X represents the number of stimuli in any stimulus train.

Claim 35 (new) The method of claim 34, wherein the step (c) to generate additional, different datapoints on each NR growth curve from NR#1 to NR #Last is accomplished by varying the stimulus amplitude while keeping the stimulus pulsewidth constant.